

**EXHIBIT A**  
(Vasel Declaration)

curriculum vitae

## Edward J. Vasel

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### Kent State University – B. S. Aerospace Engineering 1972

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Mr. Vasel is a Scientist, Inventor, Experimentalist and Test Coordinator with 28 years of broad R&D experience involving non-lethal technology, space optics, nuclear underground tests, fluid dynamics, aerodynamics and bio-mechanics. His projects have required state-of-the-art research concepts in technical areas such as: non-lethal weapons, blast overpressure injury effects, bio-mechanical models, blunt trauma injury, high energy physics, radiation hardening of satellite optics, two-phase flow modeling, underwater launch dynamics, water jet impactors, air cushion vehicles, surface effect ships, high-speed water jet inlets, and aircraft structural design.

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**Current Position :** Jaycor Tactical Systems ( 2000 to present )

#### **Chief Scientist and Vice President of Engineering and New Product Development**

Directs and manages the non-lethal engineering programs and new product development team. Creates and implements the product engineering and production plan. Evolves existing technology or invents new concepts to meet various market demands for new products. Patents advances in technology. Maintains product research databases. Directs product performance tests and documents results. Defines production engineering specifications for all new products.

#### **Certifications :**

California Law Enforcement Chemical Agents Instruction Course.

#### **Membership :**

American Society of Law Enforcement Trainers – Non-lethal weapons expert witness.

#### **Awards :**

Kent State University Distinguished Alumni Award for non-lethal technology research.

Inducted into Epsilon Pi Tau professional fraternity.

**Patent :** U.S. Patent No. 5,965,839

"Non-Lethal Projectile for Delivering an Inhibiting Substance to a Living Target

#### **Previous Positions :**

**Senior Scientist @ Jaycor ( 20 years )** Responsible for managing or conducting research and development projects in technical areas such as: non-lethal weapons; bio-mechanics; radiation effects, and fluid dynamics modeling. Project Manager for the Sticky Shocker non-lethal projectile program. Co-authored government reports on less-lethal technology.

Clients included: the National Institute of Justice (NIJ); Defense Advanced Research Products Agency (DARPA); the Electric Power Research Institute (EPRI); Department of Defense (DoD); and Department of Energy (DoE).

Mr. Vasel was responsible for: development of the Sticky Shocker, a wireless, electrified non-lethal projectile; demonstration of the Non-Lethal Electrified Water Cannon; development of PepperBall projectile technology; verification of the Laser Aerocurtain concept for Lockheed; investigation of the mechanism of Blast Overpressure Injury for Walter Reed Army Institute of Research; determination of the Effects of Bleed Air on Underwater Missile Launch for Vitro Laboratories; development of prototype laboratory and field test hardware for Walter Reed Army Institute of Research; and mapping of Peripheral Flow in Steam Generator Tube Support Plates for the Electric Power Research Institute. He participated in various underground nuclear tests.

**Clearance : Secret**

**Patents :**

U.S. Patent No. 5,663,710 "*Backscatter-Type Visibility Detection*"

U.S. Patent No. 5,962,806 "*Non-Lethal Projectile for Delivering an Electric Shock to a Living Target*"

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Prior to joining Jaycor, Mr. Vasel was a **Senior Fluid Dynamics Propulsion Engineer** for Rohr Marine Inc. involved in the detailed design and analysis of propulsion systems for an Air Cushion Landing Craft (LCAC) and other advanced marine vehicles. As a Hydrodynamics Engineer in the Propulsion Group for development of a 3,000 ton Surface Effect Ship, he was responsible for coordinating water jet inlet model tests, analyzing test data, correlating scale model test results with two-dimensional potential flow predictions and supplying water jet inlet hydrodynamic flow characteristics (i.e., loss coefficients, inlet drags, etc.), for input into a ship performance program. As a Test Coordinator for the Hydronautics 1/12-scale water jet inlet high-speed water channel tests and the 1/20-scale tow tank ship model tests at DTNSRDC he prepared test plans, supervised water jet inlet model tests, reduced model test data, correlated test results with computer predictions, documented test procedures and results in Navy reports, and based upon test results, proposed inlet design modifications. A significant result of this test series was the development of a low drag, "cavitation free", high speed (90 knots) fixed area water jet inlet. for the Navy.

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Mr. Vasel was an **Engineering Task Leader** in the Fluid Systems Technology group at Bell Aerospace Textron where his primary task was to assist in the development of computer programs which simulated two- and three-dimensional fluid flows through a variable area water jet inlet and the correlation of theoretical multi-dimensional flow simulation data with current experimental scale model test data.

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Prior to his position at Bell Aerospace, Mr. Vasel was a new project **Design Engineer** for Cessna Aircraft Company's Twin Engine Division.